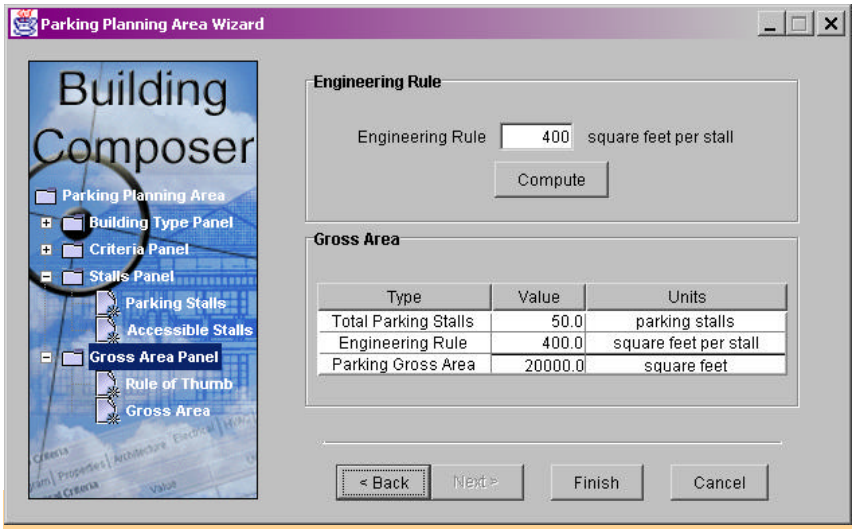
Layout Composer
Layout Composer supports the creation of conceptual facility designs. Layout Composer works in conjunction with the MicroStation platform and uses the programmed area and criteria established in Criteria Composer as a point of reference and comparison during design. In this phase, the architect would determine how many stories are needed and what functions would work on which stories (blocking and stacking). Given chosen requirements such as building footprint, street appeal, adjacency, structure, building systems, form, and massing, the designer can explore conceptual alternatives to determine the best overall solution.

Wizards
Wizards are software components that operate on a discrete design task by taking criteria and user input to create or manipulate a building and criteria model rapidly, all according to generally recognized or organization-specific practices. A Wizard extends Building Composer functionality and knows how to use the criteria data expressed in Criteria Composer to create or analyze something in a useful way. A simple wizard might be one that determines the number of parking stalls required for a building with a particular building occupancy level, based on an individual organizations standard design criteria tables and algorithms (below). A few wizards currently under development are an IFC file export to the Parametric Cost Estimating System (PACES), export to the Blast Effects Estimation Model (BEEM), design analysis and other documentation wizards.

Status
The primary Building Composer tools: Criteria Manager, Criteria Composer, Layout Composer are currently available for use. The ability to produce programmatic cost estimates using the PACES Wizard will be available for validation starting in January 2003. Documentation wizards for DD1391 type information and Request for Proposal will be available Spring 2003. The Sustainable Designer's Aid will be available for use in January 2003. The *Building Composer* web site gives further information.

Links & References
Building Composer: http://bc.cecer.army.mil/
Fort Future: http://bc.cecer.army.mil/ff
IAI: http://www.iai-international.org/
BLIS: http://www.blis-project.org/
USACE Headquarters Engineering & Construction News (Volume IV, Number 6 Aug/Sep 02 Notes): http://www.usace.army.mil/inet/functions/cw/cecwe/notes/



Building Composer's Parking Planning Wizard uses standard design criteria tables and algorithms to determine the number of parking stalls a building requires, based on building occupancy.

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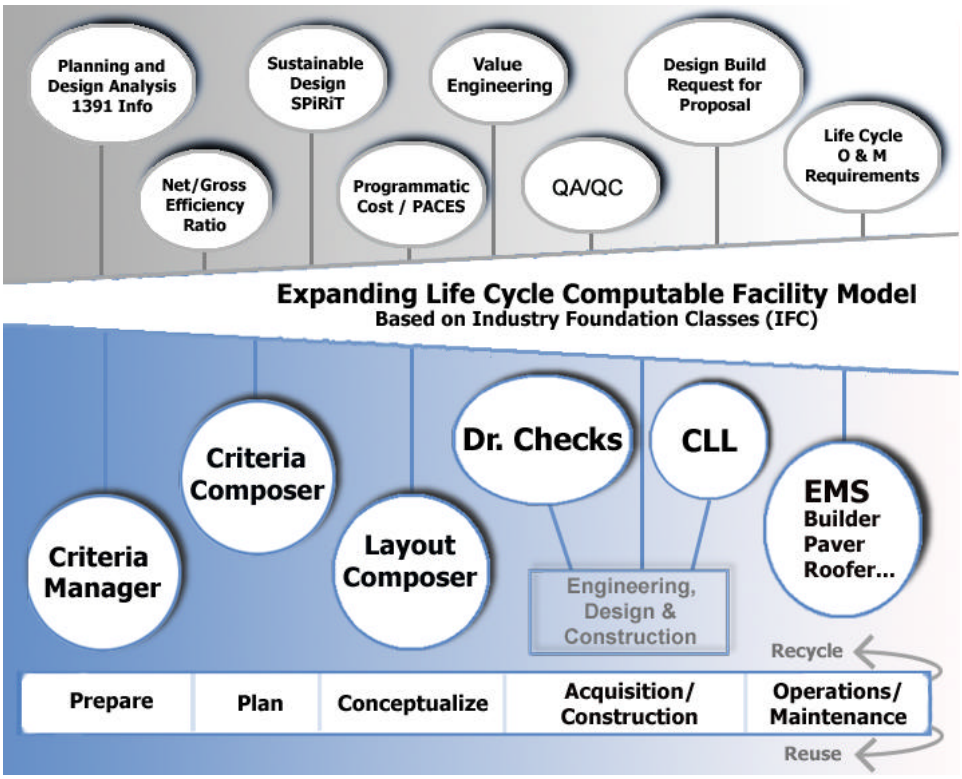

The *Building Composer* Suite consists of:

Criteria Manager, Criteria Composer, Layout Composer, and associated wizards.

With increasing customer demands and less time and money to produce effective planning documents, *Building Composer* will help you be "on target for building excellence."

compounded by the fluid state of information about the Future Combat System (FCS) and the long lead-time (5 to 7 years for large facilities) built into the Military Construction, Army (MCA) and National Environmental Policy Act (NEPA) processes. Installations designated for Stryker Brigade Combat Teams (SBCTs) have been overloaded with requirements to produce large numbers of planning documents in a very short time. Under the Unit Set Fielding process, future combat systems cannot be fielded until supporting facilities are in place, adding yet more pressure on the MCA process.

Approach

A Facility Modeling component of Fort Future, called the *Building Composer* will shorten the time required to acquire facilities while ensuring that Objective Force and FCS criteria and requirements are met. *Building Composer* tools support capturing and tracking of facility criteria and requirements, planning and design charrettes, and associated planning and design analyses.

Benefits

Building Composer will enable users to:

?? Download libraries of criteria/requirements from the Fort Future web site.
?? Construct a building "architectural" program with associated criteria/requirements.
?? Analyze alternative facility designs using multiple view representations such as 3D, mass modeling, bubble diagramming, and color by function.
?? Create a facility object model from criteria/requirements using the industry-wide facility modeling standard, Industry Foundation Class (IFC). This standard model can then be used by commercially available Architecture, Engineering and Construction (AEC) software for further design development.
?? Check the building design for sustainability using the Sustainable Project Rating Tool (SPiRiT).
?? Obtain a programmatic cost estimate using the PACES parametric cost estimating system.
?? Create a DD1391 design analysis planning document.
?? Produce request for proposal documentation for use in the design-build process.